

What is claimed is:

1. An automatic detecting method for a protocol nonconformity in a transmitting and receiving control process occurring in the communications between transmitting and receiving terminals that make at least one transmitting and receiving control process in accordance with a predetermined communication protocol, said method comprising:

a calculation step of calculating the state information regarding a transmitting and receiving state of a packet to correspond to a result of transmitting and receiving control in accordance with said communication protocol by acquiring the packet transmitted or received in the communications between said transmitting and receiving terminals; and

a comparison step of comparing the state information calculated at said calculation step and the nonconformity information featuring nonconformity in said at least one transmitting and receiving control process;

wherein the transmitting and receiving control process where said nonconformity occurs is detected based on a comparison result at said comparison step.

2. The automatic detecting method for protocol nonconformity according to claim 1, further comprising an estimation step of specifying the transmitting and receiving control process to be made based on the packet transmitted or received at said transmitting and receiving terminal in accordance with said communication protocol, and estimating

the normal information corresponding to a processing result that said specified transmitting and receiving control process is normally performed, wherein said nonconformity information defines a relation between the state information calculated at said calculation step when there is said nonconformity and said normal information.

3. The automatic detecting method for protocol nonconformity according to claim 1 or 2, wherein said nonconformity information defines a relation between said state information and a fixed value confirmed in advance for the nonconformity in said transmitting and receiving control process.

4. The automatic detecting method for protocol nonconformity according to any one of claims 1 to 3, wherein said calculation step further comprises updating said state information every time acquiring the packet, and said comparison step further comprises comparing the latest state information updated at said calculation step and said nonconformity information.

5. The automatic detecting method for protocol nonconformity according to any one of claims 1 to 4, wherein said state information includes a total number of transmitting and receiving packets, the maximum value or minimum value of

packet size, and the round trip time up to receiving a response packet to the transmitted packet.

6. An automatic detecting apparatus for a protocol  
5 nonconformity in a transmitting and receiving control process occurring in the communications between transmitting and receiving terminals that make at least one transmitting and receiving control process in accordance with a predetermined communication protocol, said apparatus comprising:

10 packet acquiring means for acquiring a packet to be transmitted or received in the communications between said transmitting and receiving terminals;

calculation means for calculating the state information regarding a transmitting and receiving state of said packet  
15 to correspond to a result of transmitting and receiving control in accordance with said communication protocol based on said packet acquired by said packet acquiring means; and

comparison means for comparing the state information calculated by said calculation means and the nonconformity  
20 information featuring nonconformity in said at least one transmitting and receiving control process, said nonconformity information being accumulated in advance;

wherein the transmitting and receiving control process where said nonconformity occurs is detected based on a  
25 comparison result from said comparison means.

7. The automatic detecting apparatus for protocol nonconformity according to claim 6, further comprising estimation means for specifying a transmitting and receiving control process to be made for the packet acquired at said transmitting and receiving terminal in accordance with said communication protocol based on said packet acquired by said packet acquiring means, and estimating the normal information corresponding to a processing result that said designated transmitting and receiving control process is normally performed, wherein said nonconformity information defines a relation between the state information calculated by said calculation means when there is said nonconformity and said normal information.

8. The automatic detecting apparatus for protocol nonconformity according to claim 6 or 7, further comprising packet filter means for selecting only a required packet based on the header information of packet acquired by said packet acquiring means and transferring it to said calculation means.